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File 5:Biosis Previews(R) 1969-2005/Mar W3  
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File 10:AGRICOLA 70-2005/Jan  
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Set Items Description

? s azufrado and peruano and 87

6 AZUFRADO

39 PERUANO

86075 87

S1 4 AZUFRADO AND PERUANO AND 87

? t 1/5/1-4

1/5/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0014936453 BIOSIS NO.: 200400307210

The genetic anatomy of a patented yellow bean

AUTHOR: Pallottini L; Garcia E; Kami J; Barcaccia G; Gepts P (Reprint)

AUTHOR ADDRESS: Dept Agron and Range Sci, Univ Calif Davis, 1 Shields Ave,  
Davis, CA, 95616, USA\*\*USA

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JOURNAL: Crop Science 44 (3): p968-977 May 2004 2004

MEDIUM: print

ISSN: 0011-183X (ISSN print)

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Since a 1980 Supreme Court decision, it is possible in the USA to obtain a utility patent for crop cultivars and other life forms.

Furthermore, it is also possible to obtain Plant Variety Protection (PVP) for a cultivar. Among the awards of the United States Patent and Trademark Office and the USDA Plant PVP Office are a utility patent and a PVP certificate, respectively, associated with a yellow-seeded bean (*Phaseolus vulgaris* L.), specifically the cultivar Enola. These awards have been controversial because of, among several reasons, the perceived lack of novelty of the yellow seed color and the cultivar itself. To check the origin of Enola, we fingerprinted a representative sample of 56 domesticated common bean accessions, including a subsample of 24 cultivars with yellow seeds similar to those of Enola. Fingerprinting was accomplished with amplified fragment length polymorphisms (AFLP). Five *EcoRI*/*MseI* and five *PstI*/*MseI* primer combinations were used, which revealed 133 fragments. The *PstI*/*MseI* primer combinations revealed a 3-fold larger number of polymorphic markers than the *EcoRI*/*MseI* primer combinations. Most yellow-seeded beans, including Enola, were included in a tightly knit subgroup of the Andean gene pool. Enola was most closely related to the pre-existing Mexican cultivar **Azufrado Peruano**

\*\*\*87\*\*\* A sample of 16 individuals of Enola displayed a single 133-AFLP-fragment fingerprint, which was identical to a fingerprint observed among yellow-seeded beans from Mexico, including **Azufrado**

\*\*\*Peruano\*\*\* \*\*\*87\*\*\* Probability calculations of matching the specific

Enola fingerprint showed that the most likely origin of Enola is by direct selection within pre-existing yellow-bean cultivars from Mexico, most probably ' \*\*\*Azufrado\*\*\* ' ' \*\*\*Peruano\*\*\* ' ' \*\*\*87\*\*\* '.

DESCRIPTORS:

MAJOR CONCEPTS: Horticulture--Agriculture

BIOSYSTEMATIC NAMES: Leguminosae--Dicotyledones, Angiospermae, Spermatophyta, Plantae

ORGANISMS: Phaseolus vulgaris {bean} (Leguminosae)--vegetable crop, **Azufrado Peruano 87**, cultivar-Enola, yellow-seed character

COMMON TAXONOMIC TERMS: Angiosperms; Dicots; Plants; Spermatophytes; Vascular Plants

METHODS & EQUIPMENT: AFLP {amplified fragment length polymorphism}--genetic techniques, laboratory techniques; genetic fingerprinting--genetic techniques, laboratory techniques

MISCELLANEOUS TERMS: crop cultivar patent issues

CONCEPT CODES:

10062 Biochemistry studies - Nucleic acids, purines and pyrimidines

53008 Horticulture - Vegetables

53012 Horticulture - Miscellaneous and mixed crops

BIOSYSTEMATIC CODES:

26260 Leguminosae

1/5/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013483912 BIOSIS NO.: 200200077423

Classical and molecular genetic studies of the strong greenish yellow seedcoat color in 'Wagenaar' and 'Enola' common bean

AUTHOR: Bassett Mark J (Reprint); Lee Rian; Otto Carla; McClean Phillip E

AUTHOR ADDRESS: Horticultural Sciences Department, University of Florida, Gainesville, FL, 32611, USA\*\*USA

JOURNAL: Journal of the American Society for Horticultural Science 127 (1): p50-55 January, 2002 2002

MEDIUM: print

ISSN: 0003-1062

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Inheritance of the strong greenish-yellow (SGY) seedcoat color in 'Wagenaar' common bean (*Phaseolus vulgaris* L.) was investigated. Line 5-593 is a determinate, Florida dry bean breeding line (with small black seeds) used as the recurrent parent in the development of many genetic stocks, e.g., g b v BC35-593. Through crosses with genetic tester stocks, the seedcoat genotype of 'Wagenaar' was confirmed to be C J g b vlae Rk. Three randomly amplified polymorphic DNA markers (OAP7850, OAP31400, and OU14950) that cosegregated with the G seedcoat color locus were developed from the F2 population derived from the cross g b v BC2 5-593 X G b v BC3 5-593. From the cross 'Wagenaar' X g b v BC3 5-593, 80 F2 plants were classified into 54 non-SGY and 16 SGY seedcoat color plants. When the OAP7850 marker was applied to that population, linkage was not observed with the non-SGY and SGY phenotypes. Conversely, a molecular marker (OAP12400, that was developed from the F2 from the cross 'Wagenaar' X g b v BC3 5-593) linked to the locus controlling the SGY phenotype segregated independently of the G locus. Therefore, SGY phenotype is not controlled by the G locus. An F3 progeny test of 76 F2 plants from the cross 'Wagenaar' X g b v BC3 5-593 confirmed the hypothesis that a single recessive gene (for which we propose the symbol gy) controls the seedcoat color change from pale greenish yellow (PGY) to SGY. Through crosses with

genetic tester stocks, the seedcoat genotype of 'Enola' was determined to be C J g b vlae Rk. The test cross 'Enola' X 'Wagenaar' demonstrated that 'Enola' also carries the gy gene. The relationship of 'Enola' to the 'Mayocoba' market class of common bean and to 'Azufrado \*\*\*Peruano\*\*\* \*\*\*87\*\*\* ' is discussed.

DESCRIPTORS:

MAJOR CONCEPTS: Genetics; Horticulture--Agriculture  
BIOSYSTEMATIC NAMES: Leguminosae--Dicotyledones, Angiospermae, Spermatophyta, Plantae  
ORGANISMS: Phaseolus vulgaris {common bean} (Leguminosae)--cultivar-Enola, cultivar-Wagenaar, seedcoat color, vegetable crop  
ORGANISMS: PARTS ETC: seedcoat  
COMMON TAXONOMIC TERMS: Angiosperms; Dicots; Plants; Spermatophytes; Vascular Plants  
METHODS & EQUIPMENT: random amplified polymorphic DNA marker method--molecular genetic method

CONCEPT CODES:

03502 Genetics - General  
03504 Genetics - Plant  
53008 Horticulture - Vegetables  
53012 Horticulture - Miscellaneous and mixed crops

BIOSYSTEMATIC CODES:

26260 Leguminosae

1/5/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0011341797 BIOSIS NO.: 199800136044

Susceptibility of some varieties of Phaseolus spp. to Zabrotes subfasciatus (Boheman)

AUTHOR: Borboa-Flores J (Reprint); Wong-Corral F J (Reprint); Topete-Hernandez M L (Reprint); Sanchez-Marinez R I; Cortez-Rocha M O (Reprint); Guzman-Marquez M

AUTHOR ADDRESS: Dep. Invest. Posgrado en Alimentos, Univ. Sonora, Apartado Postal 1658, Hermosillo, Sonora, Mexico\*\*Mexico

JOURNAL: Southwestern Entomologist 22 (4): p453-458 Dec., 1997 1997

MEDIUM: print

ISSN: 0147-1724

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Fifteen varieties of bean, Phaseolus spp., were studied for relative susceptibility to the following effects of Mexican bean weevil, Zabrotes subfasciatus (Boheman): numbers of eggs laid, percentage of emergence (new progeny), damaged kernels, grain weight loss, and effect on germination. The sex ratio of progeny was also determined. The Tepari and Yorimuni varieties with the lowest numbers of laid eggs, new progeny, weight loss, and highest germination rates were the most resistant. Varieties Bolita Queretaro and Rio Grande were the most susceptible. Z. subfasciatus prefers small light-colored kernels such as Tepari and Yorimuni varieties.

DESCRIPTORS:

MAJOR CONCEPTS: Agronomy--Agriculture; Genetics; Pest Assessment Control and Management  
BIOSYSTEMATIC NAMES: Coleoptera--Insecta, Arthropoda, Invertebrata, Animalia; Leguminosae--Dicotyledones, Angiospermae, Spermatophyta, Plantae  
ORGANISMS: Zabrotes-subfasciatus {Mexican bean weevil} (Coleoptera)--pest

; Phaseolus-spp. {bean} (Leguminosae)--crop, cultivar-Bolita Queretaro, cultivar-Canario 72, cultivar-Flor de Mayo, cultivar-Jamapa, cultivar-Mayocoba, cultivar-Ojo de cabra, cultivar-Olate, cultivar-Peruano 87, cultivar-Pimono azufrado, cultivar-Pinto UI-111, cultivar-Pinto UI-114, cultivar-Rio Grande, cultivar-Tepari Chihuahua 79, cultivar-Tepari MAS LCG-30, cultivar-Yorimuni

COMMON TAXONOMIC TERMS: Animals; Arthropods; Insects; Invertebrates; Angiosperms; Dicots; Plants; Spermatophytes; Vascular Plants

MISCELLANEOUS TERMS: emergence percentage; germination rates; number of eggs laid; pest susceptibility; weight loss

CONCEPT CODES:

03504 Genetics - Plant  
16501 Reproductive system - General and methods  
51512 Plant physiology - Reproduction  
53008 Horticulture - Vegetables  
60004 Economic entomology - Field, flower and truck crops  
64076 Invertebrata: comparative, experimental morphology, physiology and pathology - Insecta: physiology

BIOSYSTEMATIC CODES:

75304 Coleoptera  
26260 Leguminosae

1/5/4 (Item 1 from file: 10)

DIALOG(R)File 10:AGRICOLA

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4072588 23334281 Holding Library: AGL

Classical and molecular genetic studies of the strong greenish yellow seedcoat color in 'Wagenaar' and 'Enola' common bean

Bassett, M.J. Lee, R.; Otto, C.; McClean, P.E.

Alexandria, Va. :

Journal of the American Society for Horticultural Science. Jan 2002. v. 127 (1) p. 50-55.

ISSN: 0003-1062

DNAL CALL NO: 81 S012

Language: English

Includes references

Place of Publication: Virginia

Subfile: IND; OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);

Document Type: Article

Inheritance of the strong greenish-yellow (SGY) seedcoat color in 'Wagenaar' common bean (*Phaseolus vulgaris* L.) was investigated. Line 5-593 is a determinate, Florida dry bean breeding line (with small black seeds) used as the recurrent parent in the development of many genetic stocks, e.g., gbvBC(3)5-593. Through crosses with genetic tester stocks, the seedcoat genotype of 'Wagenaar' was confirmed to be CJgbv(lae)Rk. Three randomly amplified polymorphic DNA markers (OAP7(850), OAP3(1400), and OU14(950)) that cosegregated with the G seedcoat color locus were developed from the F2 population derived from the cross gbvBC(2)5-593 x GbvBC(3)5-593. From the cross 'Wagenaar' x gbvBC(3)5-593, 80 F2 plants were classified into 54 non-SGY and 16 SGY seedcoat color plants. When the OAP7(850) marker was applied to that population, linkage was not observed with the non-SGY and SGY phenotypes. Conversely, a molecular marker (OAP12(400), that was developed from the F2 from the cross 'Wagenaar' x gbvBC(3)5-593) linked to the locus controlling the SGY phenotype segregated independently of the G locus. Therefore, SGY phenotype is not controlled by the G locus. An F3 progeny test of 76 F2 plants from the cross 'Wagenaar' x gbvBC(3)5-593 confirmed the hypothesis that a single recessive gene (for which we propose the symbol gy) controls the seedcoat color change from pale greenish yellow (PGY) to SGY. Through crosses with genetic tester stocks, the seedcoat genotype of 'Enola' was determined to be CJgbv(lae)Rk.

The test cross 'Enola' x 'Wagenaar' demonstrated that 'Enola' also carries the **gy** gene. The relationship of 'Enola' to the 'Mayocoba' market class of common bean and to ' \*\*\*Azufrado\*\*\* \*\*\*Peruano\*\*\* \*\*\*87\*\*\* ' is discussed.

DESCRIPTORS: Phaseolus vulgaris; genetic techniques and protocols; color ; cultivars; molecular genetics; genetic markers; loci;

Section Headings: F200 PLANT BREEDING

? s enola and yellow and bean

10 ENOLA

57490 YELLOW

56046 BEAN

S2 5 ENOLA AND YELLOW AND BEAN

? t 2/3/1-5

2/3/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0014936453 BIOSIS NO.: 200400307210

The genetic anatomy of a patented **yellow bean**

AUTHOR: Pallottini L; Garcia E; Kami J; Barcaccia G; Gepts P (Reprint)

AUTHOR ADDRESS: Dept Agron and Range Sci, Univ Calif Davis, 1 Shields Ave, Davis, CA, 95616, USA\*\*USA

AUTHOR E-MAIL ADDRESS: pigepts@ucdavis.edu

JOURNAL: Crop Science 44 (3): p968-977 May 2004 2004

MEDIUM: print

ISSN: 0011-183X (ISSN print)

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

2/3/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013483912 BIOSIS NO.: 200200077423

Classical and molecular genetic studies of the strong greenish **yellow** seedcoat color in 'Wagenaar' and '**Enola**' common **bean**

AUTHOR: Bassett Mark J (Reprint); Lee Rian; Otto Carla; McClean Phillip E

AUTHOR ADDRESS: Horticultural Sciences Department, University of Florida, Gainesville, FL, 32611, USA\*\*USA

JOURNAL: Journal of the American Society for Horticultural Science 127 (1): p50-55 January, 2002 2002

MEDIUM: print

ISSN: 0003-1062

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

2/3/3 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0012057981 BIOSIS NO.: 199900317641

Field **bean** cultivar named **enola**

AUTHOR: Proctor Larry M (Reprint)

AUTHOR ADDRESS: 269 State Hwy. 348, Delta, CO, 81416, USA\*\*USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1221 (2): 14-JUL-99 1999

MEDIUM: print

PATENT NUMBER: US 5894079 PATENT CLASSIFICATION: 800-200 PATENT COUNTRY:

USA  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Abstract  
LANGUAGE: English

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DIALOG(R)File 10:AGRICOLA  
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4072588 23334281 Holding Library: AGL  
Classical and molecular genetic studies of the strong greenish  
**yellow** seedcoat color in 'Wagenaar' and '**Enola**' common  
**bean**

Bassett, M.J. Lee, R.; Otto, C.; McClean, P.E.  
Alexandria, Va. :  
Journal of the American Society for Horticultural Science. Jan 2002. v.  
127 (1) p. 50-55.  
ISSN: 0003-1062  
DNAL CALL NO: 81 SO12  
Language: English

2/3/5 (Item 2 from file: 10)  
DIALOG(R)File 10:AGRICOLA  
(c) format only 2005 The Dialog Corporation. All rts. reserv.

3825892 22048862 Holding Library: AGL  
**Enola yellow bean** patent  
Kelly, J.D.  
Michigan State University, East Lansing, MI.  
Saginaw : Michigan Bean Shippers Association,  
Michigan dry bean digest.-- Spring 2000. v. 24 (3) p. 2-3.  
ISSN: 0885-6060  
DNAL CALL NO: SB327.M52  
Language: English

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